


E1

- i. an electrically insulating primary support substrate having a planar surface defining a first side;
 - ii. a plurality of sensors having a diameter between about 0.046 to about 0.078 inch deposited on said planar surface of said first side of the substrate;
 - iii. a plurality of electrical conductors deposited on a second side of the substrate;
 - iv. a plurality of subminiature thru-holes having a diameter in the range of about 0.002 to 0.006 inch filled with electrically conductive material, each thru-hole disposed directly under a corresponding one of the sensors for coupling one of the sensors with one of the electrical conductors;
 - v. an electrical connector disposed on the second side of the substrate, the connector having a plurality of electrical contacts, at least some of the electrical contacts corresponding one to one with an associated one of the electrical conductors and at least some of the electrical contacts being coupled to the associated one of the electrical conductors; and
- b. an encasement into which the sensor assembly is placed for directing the flow of the analyte over the sensors, and preventing contact of the analyte with the second side of the substrate, including:
- i. an inlet for allowing the fluid analyte to enter the encasement;
 - ii. an outlet for allowing the fluid analyte to exit the encasement;
 - iii. a flow channel between the inlet and the outlet for allowing the fluid analyte to pass through the housing and over each of the sensors; and

E1
iv. an opening at one side for exposing the electrical connector.

E2
Sub F2
6. (Thrice Amended) The sensor cartridge of claim 3, further including a [third] an encasement material reducing cell, the [third] encasement material reducing cell and the reference cell disposed symmetrically about the flow channel.

E3
Sub F3
19. (Twice Amended) A sensor cartridge for a fluid analyte analyzer, comprising:
a housing having an inlet and an outlet and a flow channel for allowing the fluid analyte to enter the housing;
a sensor assembly disposed in said flow channel between the inlet and the outlet;
said sensor assembly, comprising:
an electrically insulating primary support substrate having a first side defined by a planar surface;
a plurality of sensors having a diameter between about 0.046 to about 0.078 inch deposited on said planar surface of said substrate;
a plurality of electrical conductors deposited on a second side of the substrate;
a plurality of subminiature thru-holes having a diameter in the range of about 0.002 to 0.006 inch filled with electrically conductive material, each thru-hole disposed directly under a corresponding one of the sensors for coupling one of the sensors with one of the electrical conductors; and
an electrical connector disposed on the second side of the substrate, the connector having a plurality of electrical contacts, at least some of the electrical contacts corresponding one to one with

 an associated one of the electrical conductors and at least some of the electrical contacts being coupled to the associated one of the electrical conductors, said connector being accessible from the exterior of said housing.

20. (Amended) The sensor cartridge of claim 19, further comprising a reference cell, and [a third] an encasement material reducing cell, the [third] encasement material reducing cell and the reference cell disposed symmetrically about the flow channel.

REMARKS

Claims 1-17 and 19-21 remain herein for consideration. Reconsideration in view of this amendment is requested.

By this amendment, Claims 1 and 19 have been amended in order to more specifically define the invention and to more clearly distinguish over the cited references in a sincere effort to place the case in condition for allowance. The claims have been amended to define the substrate as a “primary support substrate” which clearly distinguish them over the coating structures of Brown et al and Europe.

The Examiner has rejected Claims 1-3, 6-13 and 19-22 under 35 USC §103 as being unpatentable over Betts in view of Knudson et al., Brown et al. with or without Europe. Applicants traverse the Examiner's rejection for the reason there is no teaching or suggestion in the references for combining them, and even if combined they would not provide the claimed invention. First of all, neither one of Betts nor any of the other references or any combination of them disclose or suggest “a plurality of sensors having a diameter between about 0.046 to about 0.078 inch deposited